

MACDONALD JOURNAL

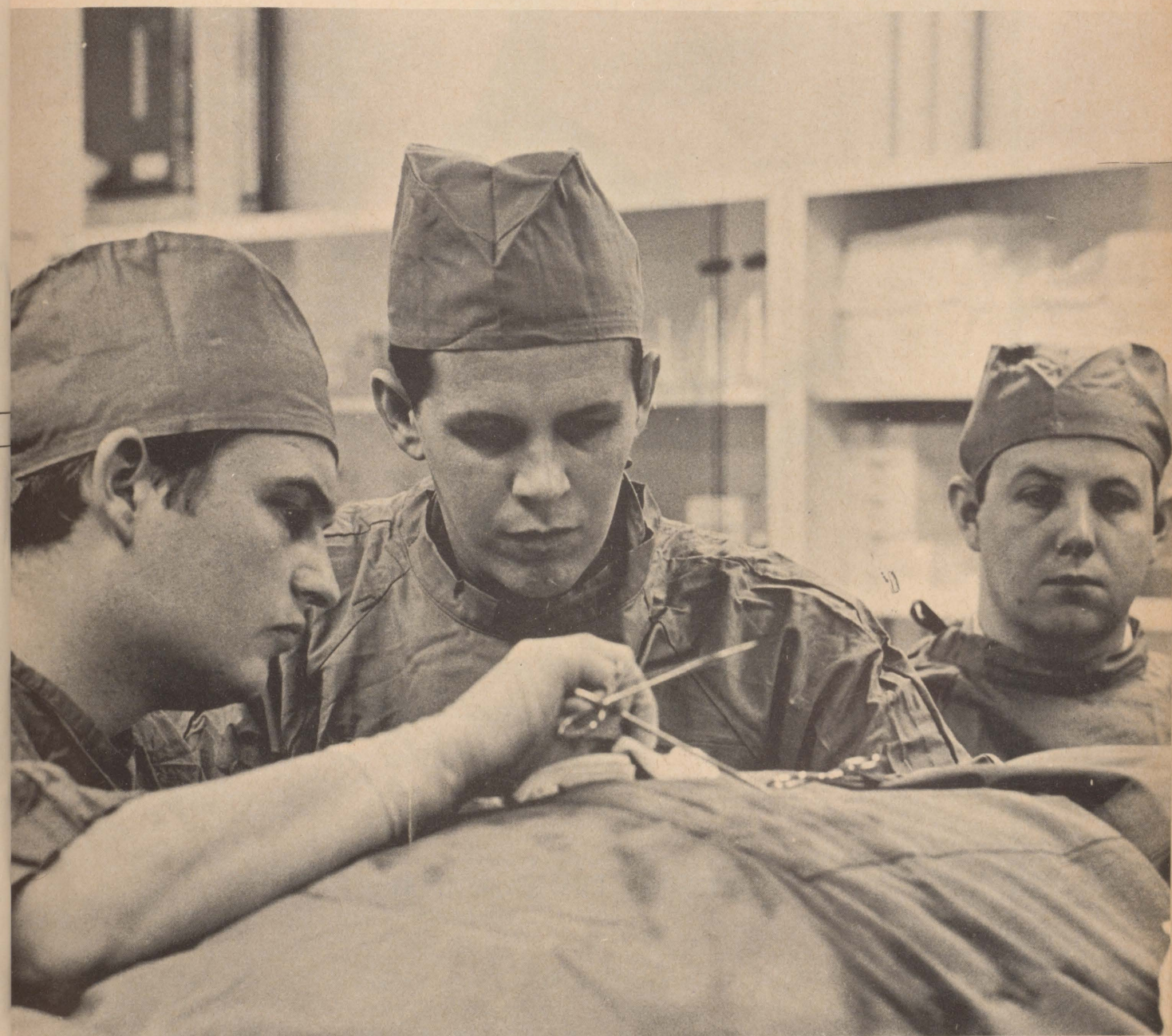
AUGUST
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AGRICULTURE

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EDUCATION

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Anatomy of
an ova transfer

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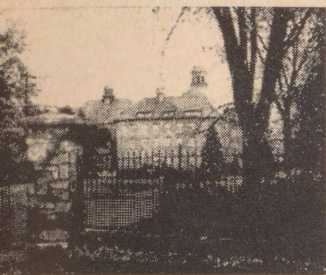


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AUGUST 1969



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MACDONALD JOURNAL

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COVER: Jim Robertson, a graduate student at Macdonald College is assisted by Dr. Robert Baker and technician Harry Lawson as he prepares an animal for an ova transfer. Jim intends to continue his education in veterinary science and hopes to specialize in the medical aspects of ova transfers.

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* Features courtesy of **McGill News**.

Stories by Peter Hendry.

Photos by Brian Smith.



a royal agricultural society for canada?

There are lots of things that the Canadian Agricultural Congress of this past winter did not do — But there is one thing that was a real accomplishment. For the first time there was a chance for intensive dialogue among the many facets that go to make up Canadian Agriculture. Farmers from every province were there. Agri-business, agricultural colleges, the provincial and federal civil services involved in agriculture were represented as were the professional societies associated with food and agriculture. It was a truly representative group — and if they had been given the opportunity, could have made decisions which in the long term would affect each and every one of us.

We need more of this kind of dialogue in Canada — in a country strung out along a couple of thousand mile border working against all kinds of geographic, climatic and cultural barriers. That it has survived for more than 100 years is nothing short of miraculous. To survive another 100 years is going to require a great deal of the kind of national dialogue that went on during that one week in Ottawa.

What I propose is the formation of a Canadian Agricultural Society — sort of a Royal Society but without the Commonwealth ideas that a title like that connotes. This Society would consist of 400 individuals — representing primary producers, Agri-business, universities and governments on an equitable basis. It would be assumed that these 400 would be the

best brains we have in Canada. They could meet a couple of times a year — like the meeting in Ottawa — but preferably in parts of the country where agriculture is a major enterprise and in parts of the country that do not lie within the shadow of the Peace Tower in Ottawa.

The key objective of this Society would be to encourage dialogue among all the representatives, to have all of them act in advisory roles to the Federal Government and thirdly to provide the best resources possible to tackle the many problems that Canadian Agriculture must face in the next 25 years. This Society could study Government policies, it could recommend areas of needed research, and it could above all, provide visible meaning to the term, "a participating democracy."

There are lots of highly intelligent people involved in Canadian agriculture, many of whom attended the Congress in Ottawa. It would be most unfortunate if the dialogue that was started at the Congress is not allowed to continue. A Canadian Agricultural Society would be one means of assuring the continuation of this dialogue — in my opinion, it would be the best. People want to be involved in the decisions that are going to affect them. Apparently the government wants involvement — now let's get on with the job. In any case, let's not forget the first successful attempts to encourage a national dialogue on agriculture.

The Editor

an international experiment

Early one morning in mid-January, Dr. Philip J. Dziuk of the University of Illinois' animal science department boarded a Montreal-bound flight at Chicago's O'Hare airport carrying a small package whose contents might have jolted any customs official. Less than an hour before, in a pre-dawn operation like hundreds of others he has carried out, Dr. Dziuk had recovered fertilized eggs from the oviduct of a purebred Duroc sow, placed them in a specially prepared culture, and headed for the airport. When he landed at Dorval, the scientist and his jars were accorded pre-arranged VIP treatment in clearing customs. By lunch time, Dr. Dziuk was carrying out the second stage of the operation, the transfer of the still living eggs to the uterus of a purebred Yorkshire sow in the surgery room of the new large animal building at Macdonald College.

Ova transplants in domestic livestock are scarcely news any more. At Macdonald, in fact, fourth year students are conducting such operations on rabbits. But carrying out the transplant operation over an extended period of time and across international boundaries is another matter.

The success of this first in ova transfers was evident by May the 8th, when 4 fine healthy piglets were delivered.

This particular experiment came about as a result of talks between Dr. Dziuk and Dr. Baker, a native of Illinois and a former student of Dr. Dziuk's. The latter had been invited to give a seminar at Macdonald and it was decided at the same time to give the long distance transplant operation of Canadian government officials in future possibilities of ova importation and partly because a previous attempt to ship living ova from Illinois to Cambridge, England, had gone awry.

The difficulties encountered in carrying out a successful ova transplant are formidable. To begin with, the estrus cycles of both the donor and host animals must be closely synchronized. The precise techniques for achieving this vary according to the

species concerned but it normally involves the application, and later withdrawal of some heat-inhibiting hormone.

While the techniques for recovery of eggs from the donor animal have been fairly well developed, they are far from simple. Here's how Dr. Dziuk described the process in a recent paper: "The small size of the egg relative to the size of the donor animal makes the search for eggs a little like the search for the proverbial needle in the haystack. Fortunately the search can be narrowed down to a rather restricted area of the oviduct or uterus, particularly when ovulation time is known. Egg recovery has always been based on a scheme of flushing the uterus or oviduct with a fluid medium, thereby carrying the eggs along. Because the specific gravity of an egg is greater than that of most media, the eggs settle to the bottom of the fluid, limiting the search to one focal plane. A stereoscopic, binocular microscope with a range of magnification between eight and 30 times is essential for identification and isolation of the egg. Flat-bottomed plastic petri dishes marked off with lines 10 millimeters apart permit a systematic search without changing the focal plane. They will hold as much as 40 millilitres of fluid in a relatively thin layer. This is especially important if the fluid contains blood and other debris. The search can best be done with light transmitted through frosted glass or translucent petri dishes."

And on it goes, listing particular peculiarities for each of the three principal species used: cows, sheep, and swine.

Even more critical to the success of the operation is the storage of eggs once they have been removed from the donor and before they are transferred to the recipient. So far, no method has been developed which can extend the life of the stored egg beyond 10 or 12 hours. The basis for most storage media is a homologous blood serum, either alone or with equal portions of some physiological salt solution. Sheep eggs have been successfully stored in the uterus of a rabbit.

Dr. Baker sees this question of storage as the critical one. If the technique is ever to have commercial significance in the livestock industry, he points out, its most logical develop-

ment would be some method of holding immature eggs in storage. From the point of view of breeding flexibility, it is the unfertilized egg in storage which is needed for matching with selected semen samples. Given this breakthrough it would be possible to store hundreds and even thousands of eggs from one genetically superior dam, fertilizing them with semen from equally superior male stock, and then transferring the fertilized egg for incubation in a genetically inferior host animal.

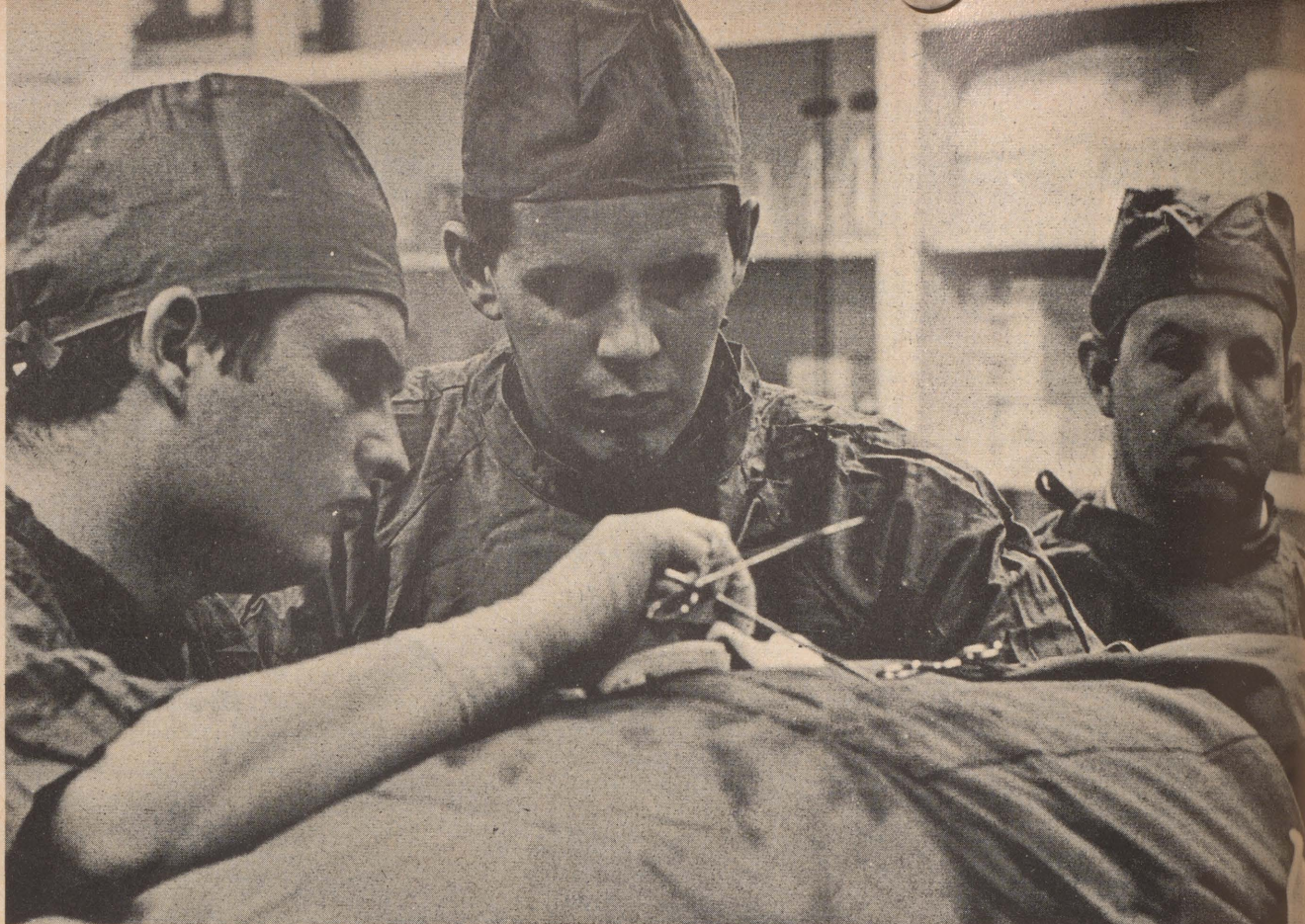
So far, no such adequate method of storage has presented itself but Dr. Baker and his research group are studying closely the hormonal properties of the ovaries in the animal species concerned in the hope that these may yield the clue to longer life for immature eggs outside the ovary.

In one sense this problem is analogous to that faced by artificial inseminators in developing successful methods of storing frozen semen. But, as Dr. Baker points out, the egg is a much more sensitive and fragile thing and it is not suggested that similar techniques will answer this new riddle.

Finally, there is the problem of the effective transfer of the egg. In the main this has been accomplished only by surgery, a method too complicated and costly for commercial application. Japanese and British researchers, however, appear to have overcome the problems associated with transfer of the eggs by pipette, similar to that used in artificial insemination. The perfection and widespread introduction of this technique would provide considerable impetus to the development of ova transplants.

Dr. Baker sees his work as having significance beyond the agricultural field. In a separate project he is working closely with a pathologist at the Royal Victoria Hospital in studies of the human ovary. One aspect of this study is concerned with problems of infertility which he believes are growing in the human race.

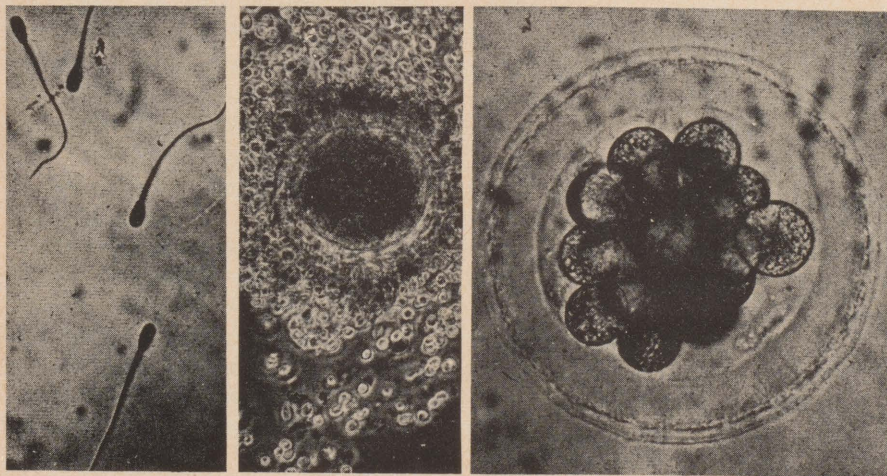
This work at Macdonald is still in its infancy. Dr. Baker joined the staff in 1965 but not until the large animal centre was opened last year did he have the kind of facilities necessary to carry out ova transplant experimentation on domestic livestock. It now promises to be one of the more exciting areas of research in the college's future.



anatomy of an ova transfer

For the research team of graduate student Jim Robertson and Dr. Robert Baker, assistant professor of animal science, the moment was critical. In the sterile, fluorescent atmosphere of Macdonald's brand-new animal surgery Dr. Baker had just made the 14-inch high lumbar incision on a half-ton heifer that would open the way to the animal's oviducts. There, the team would inject 20 mature cow ova, each one only 200 microns in diameter, into the heifer's oviduct to await fertilization by a high quality sperm cell. It was the beginning of an operation that would last nearly three hours and

Above: Graduate student Jim Robertson, left, and animal physiologist Dr. Robert Baker begin their historic ova transfer operation as senior technician Harry Lawson looks on. The operation took place in the surgery of Macdonald College's new large animal teaching and research facility.



Left: Highly magnified views of bovine sperm and ova. Cells surrounding the immature follicular egg at centre are very important to the maturation process. Ovum at right has been fertilized and the cells have begun to divide and grow. At this stage, both eggs would be about the size of a pinhead.

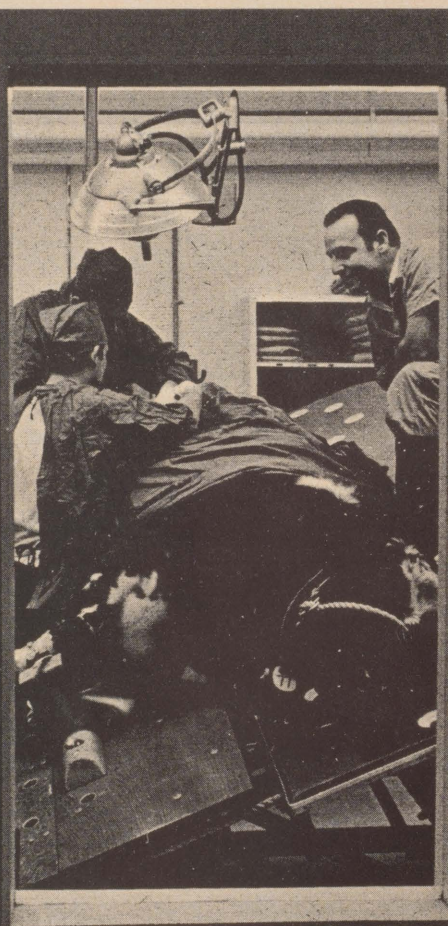
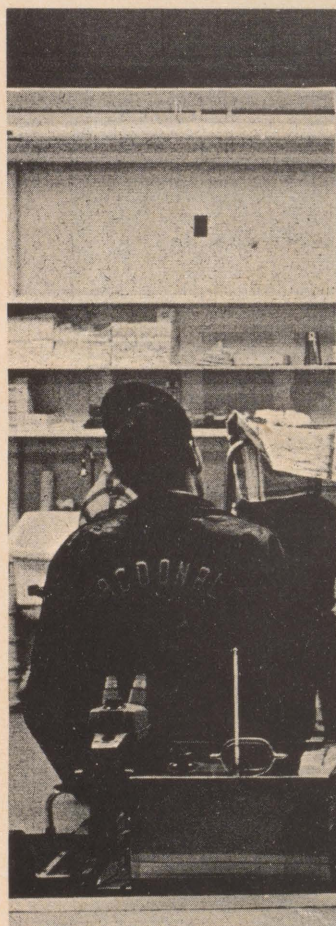
would mark a "first" in the College's research activities.

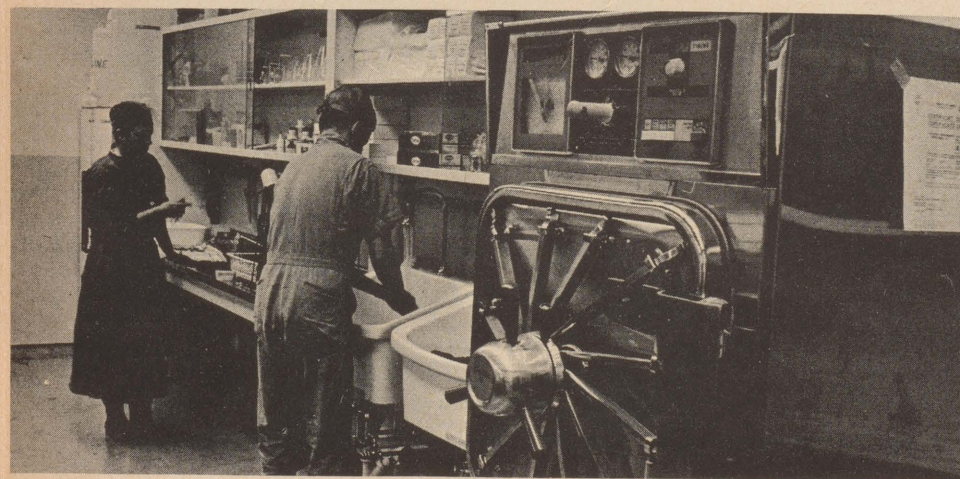
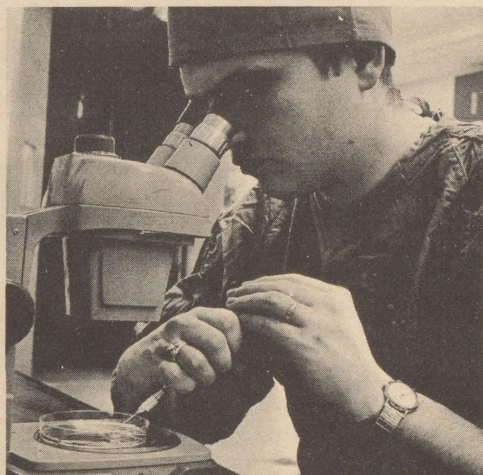
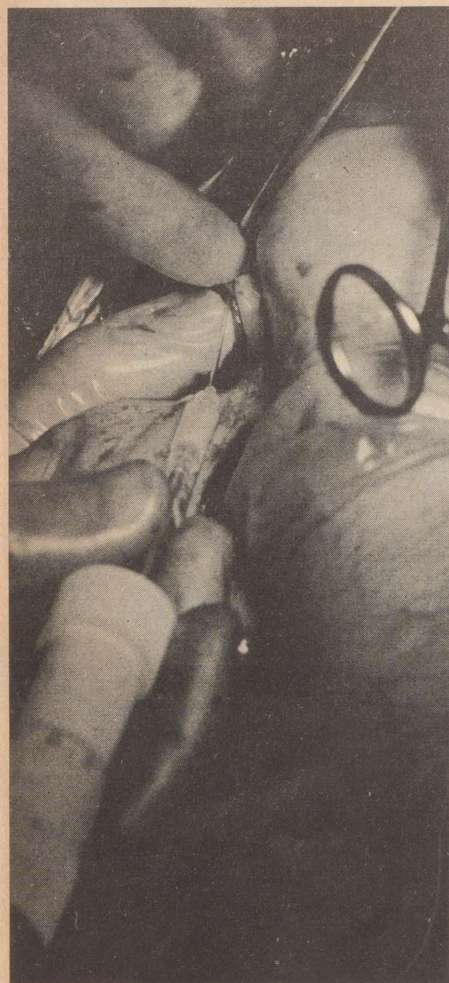
Indeed, no such operation had ever been attempted in Canada before. It was unique because the objective was to fertilize inside the heifer an egg which had previously matured *in vitro*, that is, in a precisely-controlled incubator. Two days before the operation, Jim Robertson arrived at Macdonald from a slaughter-house with a test-tube containing 50 or 60 eggs which he had recovered from the ovaries of freshly-killed cows. At the College, he transferred the eggs into a synthetic, highly-purified culture media, and placed them in an incubator to mature for 36-40 hours. During the operation those eggs which had undergone maturation divisions would be surgically implanted in the "host" heifer's ampulla, that small area of the oviduct where an egg would have been fertilized had she ovulated normally.

Preparing the animal for surgery was not easy. After firmly securing her to a motorized, tilting table, Robertson and Dr. Baker shaved the heifer's flank (*top*) and administered a powerful tranquilizer and nerve-blocking treatment to anaesthetize her. The table was rolled under the lights and the operation began before an audience of curious Macdonald students (*right*).

Carefully, so as not to touch anything but the tray of sterile instruments, Dr. Baker took a gleaming silver scalpel in his gloved hand. "Well, here goes," he said, and the scalpel slid smoothly down the heifer's flank followed by a thin trickle of blood. Slowly, deliberately, Dr. Baker worked his way through the muscle and the peritoneum. "Holy cow!" the doctor exclaimed, "this heifer's a tough one."

Anatomically, no two cows are identical, but the animal on the table (*right bottom*) was unusual. Her reproductive tract was rather small and several inches to the left of the incision, making it difficult to position the uterus. Dr. Baker ordered the table



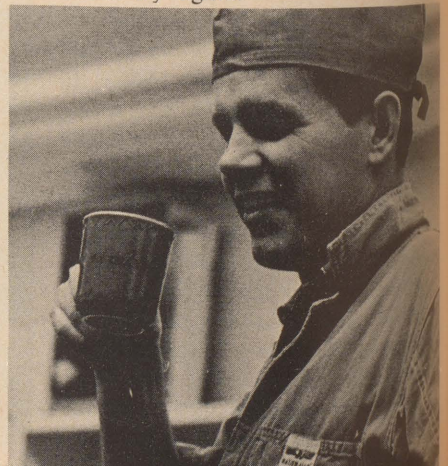


tilted forward so that he could gain easier access to her tract.

Under normal procedures the heifer would have been inseminated about 12 hours prior to the operation, but she had proved uncooperative and the decision was made to inject semen directly into her uterus. Two small vials of frozen semen were removed from a liquid nitrogen canister, warmed and examined under the microscope to see if the sperm were viable. As Dr. Baker filled his hypodermic (*top right*), Robertson filled his micro-pipette with follicular eggs fresh from the incubator (*left*). A short time later, the semen safely acclimatized in the heifer's uterus, the tricky job of finding the oviduct began. Finally, the team located the small tube (*far left*) and the eggs were transferred to the animal's oviduct.

The transfer complete, the team cleaned up. As Dr. Baker sutured the heifer, Robertson and the assistants sterilized the instruments and hosed down the surgery. The heifer was led to adjoining pens (*left*) and the team washed up (*bottom*). For the first time in three hours, Dr. Baker took a coffee break (*below*).

The operation was not a complete success. Three days later when the heifer was slaughtered, the team recovered only one of the 20 eggs — and it had not been fertilized. "But," said Dr. Baker, "the negative result is not important this first time around. We'll try again."



how and when?

The Macdonald Journal interviewed Prof. Robert Baker of the Department of Animal Science about the practical implications and possibilities of using ova transfers on farms in Quebec.

Q. What are the practical implications of ova transfers as far as on-farm use are concerned?

Prof. Baker. The practical application of on-farm ova transfers will depend on the development of the non-surgical technique for ova transfers. This has been worked on and is in the preliminary stages of being developed. Once we can transfer an ova non-surgically, then this will be potentially applicable on the farm.

The main advantages of using ova transfers are concerned with the improvement or selection of superior genetic female gametes. Just as we have used semen to maximize the use of a superior sire, we can use ova to maximize the use of a superior cow. There are other advantages as well. There is the potential to decrease some of the infertility because a lot of pregnancy failures result from defective gametes. Once we develop technology developed to the point where we know we have a fertilized egg or maybe two fertilized eggs and we put these into a cow and we know that they are good up to that point, we eliminate a very big question mark that has existed. Using ova transfers we will have the potential to get one hundred percent conception.

Another advantage will be sex control. We haven't been able to control sex very effectively by separating male sperm but there are methods available for sexing fertilized eggs. It will be possible, at least theoretically, to transfer embryos into the female so

that we will know the sex of developing calf or calves. Say you have a Holstein herd and you want to go to beef production you could transfer in fertilized ova from a beef breed of your choice so that the following calf crop would be 100% purebred beef stock. You have this potential flexibility to switch back and forth. Presumably you wouldn't want to switch very often because it would be pointless but you could if you knew you could predict that you were going to want to go completely from beef to dairy or dairy to beef.

Q. When is the ova transfer process going to be readily available on Quebec farms?

Prof. Baker. It will probably be at least ten or fifteen years before on-farm ova transfers will be feasible. I would guess that the technology is not that far away but it takes a long time to get these things applied once you have the techniques with which you can do the transfer. There are several laboratories working on developing the technology. There have been successes so that we know that it can be done but it is a matter of how quick it can be applied and put into use. The big drawback or limitation right now is in storing a large number of eggs. Unless you have a supply of eggs ready to be used, the technique is very definitely limited.

Some day there will be farmers who specialize in a selection program one that is quite a lot different using this potential technique. In the past you have had to upgrade cattle by selecting on the basis of the average herd. Using this new system, you would be able to take the very best cow and extend that cow over a hundred cows in a herd. Selection then would not be to improve the

average but would be to maximize the potential of the superior cow or cows, maximize her environmental potential, and see how much superior she is with respect to other potentially superior cows.

Ova transfers once they are sufficiently developed, may be considerably easier for on-the-farm application than artificial insemination because ova transfers are done after the fact. For example, ova transfers will be made, probably three to four days after the cow has come into heat, so that there will be more potential for planning. At present, you have to catch the cow in heat. With this technique you do a good job checking heat and you know a cow is in heat today, so you have three to four days to get organized for the transfer technicians. Thus there is built-in time for planning. However, this technique hinges on the development of methods for storing unfertilized ova.

Q Should I ask you of the implications of ova transfers in humans?

Prof. Baker. It is a fair question. If you look at the scientific literature, medical doctors are very much interested in ova transfers. They are interested to some degree because of a real problem in repair of oviduct blocking in the human. This is a fairly common cause of infertility in humans. Attempts to repair the oviduct have been relatively unsuccessful so that the medical profession is looking at the potential of ova transfer very closely as a possible way for women with tubular blockages to have children. Thus, ova transfer has a very immediate application at least in specialized infertility cases. I don't think it would be used extensively except in these cases.

remodeling the kitchen

By Celia L. Ferguson,
School of Food Science



A great deal of attention today is centered on design, appliances and decoration of the kitchen. The magazines are filled with pictures of kitchens in brightly coloured decor and equipped with the latest in modern appliances. Possibly because of this there appears to be a new interest in remodeling the out-of-date inefficient kitchen so often found in older homes. An unhandy kitchen can be revamped to look and work like new with carefully planned remodeling. However, when remodeling is contemplated it is often difficult to decide how to begin and sometimes the project never gets off the ground because of this.

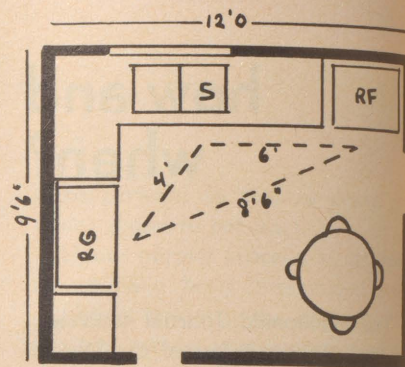
The first step is to take a good look at the existing layout and list all the things wrong with it. There is a good chance that all or most of them can be corrected in the new plan. The appliances too should be assessed and decisions made on replacements or on additional ones to be purchased.

It is well at this stage to take the time to make a scale drawing of the room. A working scale to use is $\frac{1}{2}'' = 1'$. Then cut out templets representing each piece of large equipment and counter areas. These should be drawn on the same scale to the dimensions of the various items. The templets can then be moved about on the scale drawing of the room to try out the various arrangements possible. The sample layouts shown here give suggestions that may be adapted to most situations. If space allows, it may be possible to design the kitchen as part of a family room, as several of these plans lend themselves nicely to this type of layout.

A test of the efficiency of the plan can be made by drawing the triangle formed by the three work centers. This is the "work triangle". The total length of the sides of the triangle should not be more than 22 feet.

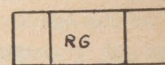
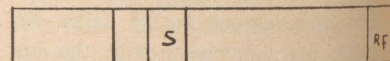
In the planning it is wise to consider the following factors:

1. Kitchens consist basically of three work areas; preparation, cleanup and cooking. The sequence of



work progression should be considered in the location of these areas.

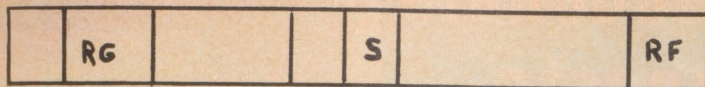
2. The layout should be planned so that traffic through the kitchen does not cut through the path of the housewife in moving to various work areas. This cannot be avoided in the corridor type plan.
3. Select appliances scaled to the size of the room. Where space is a factor and double oven convenience is required choose a range styled with an oven above and below the cook-top. When space allows, a wall oven is an attractive feature.



Two wall, Pullman or Corridor —

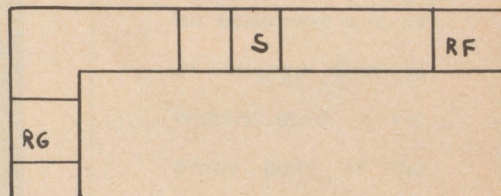
Used when there is a door at each end of the room. Satisfactory plan when there is little or no traffic.

4. Ample storage space is very important. Adjustable shelves, dividers in drawers, pull out shelves in deep storage units and lazy susans in corner cabinets add to convenience. A floor-to-ceiling pantry unit with shallow shelves provides excellent storage for food or dishes.
5. Total counter space should be as generous as possible. One three foot long area for food preparation is a great convenience. An area of counter covered in stain-

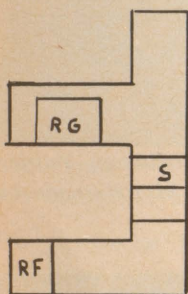


One Wall — Used in small homes and apartments. Work areas are often too small so plan is not ideal.

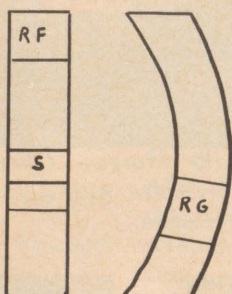
less steel or ceramic tile located next to the range is handy for placing hot pots and pans. In cases where counter space it at a minimum working area can be augmented by means of a small mobile table which can be moved to the spot where required. This is particularly handy to use in conjunction with the sink when washing dishes. It may be stored in a space provided under part of the counter area.



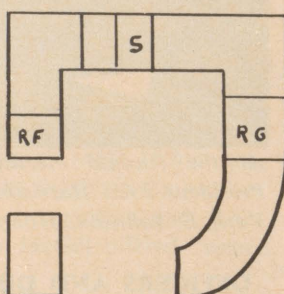
L - Shape - longer room with space free for doorways, dining area, etc.



Peninsular

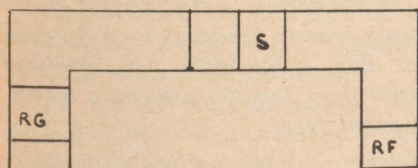


Circular

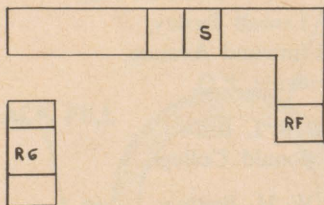


P - Shape

Code: RF — Refrigerator
RG — Range
S — Sink



U - Shape - Work areas are continuous, unbroken by doorways or traffic.



Broken U

6. If a dishwasher is not included in the clean-up center a double compartment sink with a swivel faucet should be installed. A single sink is sufficient with a dishwasher. A food waste disposer might be considered. How-

ever, this is not advisable where a septic tank is used because of the extra load imposed.

7. The kitchen should be well provided with both natural and electric light. A high voltage central fixture controlled by a

dimmer, plus individual lights over the sink, appliances and work areas are needed.

8. Ample electrical outlets should be located at each work center so that small appliances can be conveniently used. Make certain that wiring is adequate to take the appliances required.
9. Good ventilation adds greatly to comfort in the kitchen. An exhaust fan with easy-to-clean filters should be installed over the stove.
10. In locating the refrigerator note the direction of the door opening to prevent interference and give greatest convenience. Be sure to specify left or right opening when ordering.
11. If space allows, the addition of a breakfast bar or eating area is a convenient and attractive feature.
12. The scope in decorating the kitchen is unlimited with the vast assortment of colourful materials on the market for drapes, wall covering, floor and counter tops. An attractive kitchen will brighten the spirits and lighten the work.

Macdonald Reports



At the Annual meeting of the Morgan Arboretum Association, retiring President Fred Harrison was presented with a sculpture of Mr. Harrison by Vern E. Johnson, Honorary President.

morgan arboretum association

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The Presidential gavel is being passed from retiring President Fred Harrison to Bob Kirkpatrick, new President with Vern Johnson witnessing the important event.



Mr. & Mrs. Fred Harrison admire the special sculpture of Mr. Harrison.

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C.B.C. commentator appointed

It is a pleasure to welcome Mr. Steve Casselman, B.Sc. Agr. '68' back to the Macdonald Campus as a farm commentator for the C.B.C. Agriculture and Resources Department.

The College was approached by the C.B.C. to see if it would be possible to provide a desk for a farm commentator who would be responsible for Eastern Ontario and Quebec coverage. As a result, arrangements have been made to have Mr. Casselman located in Room MO14 with the Information Office and with Continuing Education. While Mr. Casselman will be reporting on agricultural developments in Quebec and Eastern Ontario, his presence on the Macdonald Campus should prove beneficial to the College.

Mr. Casselman's office number is 453-1940.

McGill confers emeritus professorship at spring convocation

AT SPRING convocation June 6, Dr. William Rowles, retired Chairman and now part-time Professor of Agricultural Physics, became emeritus professor.

Dr. Rowles was born in England in 1899 and educated in Canada. He received his B.Sc. from the University of Saskatchewan in 1924 and his M.Sc and Ph. D. from McGill in 1926 and 28 respectively.

He has been on McGill staff since 1927 and was for 25 years (1930-65) Chairman of the Department of Agricultural Physics at Macdonald. He taught both Physics and Mathematics, mainly to under-graduates, and advised graduate students.

During the war he carried extra teaching as a Senior Lecturer in the McGill training of radar technicians. After the war he taught in the accelerated course for engineers and B.Sc. students which McGill offered veterans.



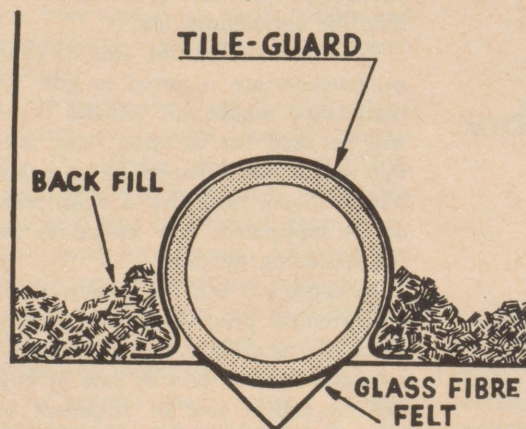
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THE FAMILY FARM

PUBLISHED IN THE INTERESTS OF THE FARMERS OF THE PROVINCE BY
THE QUEBEC DEPARTMENT OF AGRICULTURE AND COLONIZATION

Compiled by
Tom Pickup
Information Service,
Quebec Department of
Agriculture and Colonization

Photographs by
Office du Film du Québec



Spreading lime on a pasture about to be resown on the farm of Mr. Andre Pilon at Saint-Benoit.

permits for transporting agricultural lime

Truck drivers wishing to transport lime for farm use must obtain a permit from the Calcareous Amendments section of the Quebec Department of Agriculture and Colonization.

This ruling, which has already been in effect for some time and has recently been stressed by the Department's Farm Development branch, is one of several measures intended to protect everybody concerned with the production, purchase and transport of lime for agricultural use.

To obtain the permit, free of charge, truckers are required to give the registration number of vehicles which will be used for carrying lime, submit a certificate issued by a public scale official, and give a description of the equipment they intend to use for spreading the lime.

In connection with its extensive soil improvement programme, the Department of Agriculture and Colonization subsidizes the transport of lime by paying the entire cost of shipment by rail and repaying trucking costs to the extent of 10 cents a ton for the first ten miles and 5 cents a ton for the next thirty miles up to a limit of \$2.50 per ton.

The farmer concerned must obtain a permit from his local agricultural office authorizing him to use the quan-

tity of lime needed on his farm. This restriction is designed to reduce risks of overliming and the resulting possibilities of lower yields. Lime is used on farms to correct soil acidity, which is harmful to many crops and unfavorable to most kinds of beneficial soil bacteria.



A labour-saving method of spreading lime. The lime is transported in bulk from the quarry and spread by a specially adapted truck. All that Mr. R. Lambert of Ste-Agathe had to do was 'phone his local cooperative, and, of course, pay the bill.



A Quebec farmer: Mr. Maurice Vezi-na, Gold medal winner in the 1967 agricultural merit contest. His farm is at Saint-Michel in Bellechasse County.

judges of 1969 agricultural merit contest

The minister of Agriculture and Colonization, Mr. Clément Vincent has appointed the following panel to judge the farms of contestants in this year's Agricultural Merit competition.

Mr. Maurice Laliberté of Honfleur in Bellechasse county, who was made Commander of the Order of Agricultural Merit in 1962; Mr Charles Henri Leclerc of Pont-Rouge, Portneuf county, who won the title of Commander last year; and agronomes J.C. Pelletier and Omer Beaudoin of the Quebec Department of Agriculture and Colonization. Mr. Beaudoin will head the judging panel and will also, as secretary, be responsible for publishing the report on the contest.

This year, the contest will be held in the fifth of the five areas into which the province is divided for purposes of the competition. This area comprises the electoral districts of Abitibi East, Abitibi West, Bonaventure, Charlevoix, Chicoutimi, Duplessis, Gaspé North, Gaspé South, the Magdalen Islands, Jonquière-Kénogami, Lake St. John, Matane, Matapédia, Rimouski, Roberval, Rouyn-Noranda, Saguenay, and Témiscamingue.

The panel will visit competitors' farms during July and August to judge them on the basis of standards coming under the following main headings: farm management, land and crops, buildings, livestock and equipment, and industrial crops.

As in the past, winners will be honoured at a banquet during the forthcoming Quebec Provincial Exhibition.

meeting of canadian society of animal production held at quebec

Speaking at the annual dinner of the Canadian Society of Animal Production's Eastern division, Dr Benoît Lavigne, associate deputy minister of Agriculture and Colonization of Quebec, said that although — in view of her pasture resources — dairy farming is still Quebec's best farming choice, it would not be able to compete with dairy substitutes unless it used the most up-to-date methods of management, housing and automation.

The dinner was held at Quebec during a meeting of the Society attended by more than 100 persons from the Eastern Canadian provinces on May 29th and 30th. Most of those attending were agronomes, veterinarians and agricultural scientists or research workers.

Reviewing the place of the livestock industry in Eastern Canada's economy, Dr Lavigne also mentioned Quebec's deficit in beef cattle production and said that he believed there is urgent need for research to lower the investment in land and buildings required to raise beef. He also felt that the extent of the beef cattle deficit should be re-assessed.

As regards sheep raising, he said that market-lamb production is going better in some regions, although cheap imported lamb and lack of knowledge and experience are hampering this branch of farming. Sheep raisers should plan to produce for a specific market such as the early lamb trade. Efforts in this connection are already

being made in Quebec, he added. Dr Lavigne ended his speech by advocating an attempt to find new methods of reducing costs at all stages from producer to consumer.

The Meeting

About thirty scientific papers were read at special sessions during the meeting. Topics included the feeding and management of young ruminants (including beef cattle) and non-ruminants, animal physiology and genetics.

Four group discussions — on hog grading, courses in animal science, fattening of dairy cattle, and the association's own projects — were also held during the meeting.

The following were elected to the society's board of directors for the next two years: president-elect, J. A. Macdonald, principal of the agricultural school at Centralia, Ontario; vice-president, L. A. Charette, head of the animal science department at Laval University; secretary-treasurer, G. A. Bowman, professor at the University of Guelph; R. J. Huggard of the Nova Scotia Department of Agriculture, G. L. Locking, Canada Department of Agriculture, and H. Mainville of Macdonald College, and J. C. Rennie of Guelph.

The meeting ended with a visit to the provincial agricultural research station at Saint-Augustin.

aid to buy purebred swine and crossbred sows

The Department of Agriculture and Colonization has recently put into effect a policy to encourage and help farmers to buy purebred breeding pigs and hybrid sows from approved matings.

Grants for purchasing purebred breeding stock depend on ROP test-scores and ratings obtained in the official classification of purebred swine. Boars with a weight-probe index of 100 to 110 (based on rate of gain

and thickness of back-fat) are eligible for a grant of \$25, those with an index of 111-125 may qualify for \$40, and those with an index of 126 and over, for \$55. Grants for purebred sows are \$5 less in each case. The animals must not exceed a maximum adjusted back-fat measurement of 1.2 inches nor an adjusted 200 pound age of 180 days, even if their weight-probe index is over 100.

The authorities of the Artificial Insemination and Livestock Improvement division consider that this assistance will be specially helpful to farmers for organizing and maintaining a sound programme to improve breeds and lines of pigs.

In addition, the Department of Agriculture and Colonization, being aware that cross-matings between certain breeds are beneficial as regards birthweight and feed conversion, offers grants for the purchase of hybrid sows. To be eligible, a sow must be crossbred from registered parents whose back-fat has been probed, and she must satisfy the same ROP standards as a purebred sow. Grants for hybrid sows in the weight-probe index ranges 100-110, 111-125, and 126 and over are, respectively, \$10, \$20 and \$25.

tests for milk quality explained

An important information session concerning tests for milk quality was held on May 22nd at the St-Hyacinthe Institute of Agricultural Technology.

The meeting was attended by more than 200 people including representatives of dairy plants, the U.C.C., manufacturing milk producers' federations, and other groups interested in the quality of milk.

Subjects dealt with included an historical review of milk testing, followed by a description of methods used to test the quality of milk, and the interpretation of data obtained from the tests.

Talks were illustrated by a demonstration given by professor Bernard Marcil of the Institute.

Results of quality tests are at present used as a basis for payment to producers of manufacturing milk.



One-storey stabling for cows adjoining the main barn on the farm of Mr. L. Lemay at Sainte-Emmelie, Lotbinière.

new plans for dairy barns

The Farm Buildings and Machinery division of the Quebec Department of Agriculture and Colonization has just issued a new set of plans for building a dairy barn. The plans include many improvements especially designed to ensure the animals' well-being and lighten the farmer's work.

The barn is a single-floor structure 106 feet long by 36 wide and allows ample stabling for 40 head of cattle plus space for three pens for calving, sick animals, young calves, etc. The plans give details for installing the usual fittings such as stable cleaners, drinking bowls, and ventilators. There is also a short section dealing with the construction and location of the milk-house with due regard for hygienic standards and possible sources of contamination, easy access at all seasons, and eventual expansion of the enterprise.

As regards the hay storage, the plans call for it to be separated from the main building by a passage which would delay the spread of fire: they also allow for easy access by hay-moving equipment.

The plans include a list of all materials needed to build the barn, and exhaustive details of the construction. They may be obtained free of charge

from the Farm Buildings and Machinery division, Farm Development service, Department of Agriculture and Colonization, Building "D", Parliament, Quebec.

quebec's farm credit policy

The minister of Agriculture and Colonization, Mr. Clément Vincent, has pointed out that current legislation amending Quebec's farm credit acts does not imply any change in the stand he took at the Canadian agricultural congress in March, and that Quebec's position remains essentially the same as expressed at that time.

Mr. Vincent added that Quebec counts on the cooperation of the Canadian government to ensure that the efforts now being made will provide farmers with credit facilities which are the best organized possible, and also the best suited to present-day needs of agriculture from the standpoint of increased efficiency and best use of the taxpayer's money.

Mr. Vincent also stressed that, following passage of the legislation, his government and ministry intend to

start on the second stage of the programme to adapt farm credit to the needs of modern farming. This second stage would enable Quebec to fulfil its aims and exercise its jurisdiction as regards farm credit, land use and development, and agricultural reorganization, while ensuring the necessary coordination with the federal government and the other provinces in pursuing national aims. In this connection, Mr. Vincent recalled the terms of the Quebec delegation's statement issued at the close of the agricultural congress in Ottawa. There is no doubt in his mind that the only way to get rid of the very expensive duplication of the present systems is to establish a federal-provincial farm credit formula "with strict regard for provincial jurisdictions". The existing duplication results in dissipation of effort, organizational incoordination, and administrative inefficiency.

Explaining his viewpoint in more detail, Mr. Vincent said that the plan advocated by Quebec is a shared-cost farm credit programme, both as regards investments and administrative expenses, in which the federal government might act as a central bank. The Quebec government and the Department of Agriculture and Colonization consider that a programme of this type is best suited to the province's aims and conditions and would enable Quebec to provide credit facilities really suited to the farmer's needs.

judges for 1969 regional grain corn contest

The minister of Agriculture and Colonization, Mr. Clément Vincent, has appointed the following judges for the 1969 regional grain-corn growing competition: Mr. Hubert Melançon, agronomist attached to the south-west of Montreal agricultural region, and Mr. Omer Dubois, agronomist, who is with the regional agricultural office at St-Hyacinthe and will head the judging team.

The aim of the contest is to encourage the growing of grain corn in

farming zones which get enough warmth for this crop — at least 2,500 heat units. Most of the suitable areas are in south-west and south-central Quebec and include 32 counties or parts of counties.

Competitor's crops will be judged 15 to 20 days before harvest on the basis of tillage, fertilization, freedom from weeds, maturity, and estimated yield. The leading ten competitors will share \$700 in prizes allotted by the Department of Agriculture and Colonization.

To enter for the contest, growers must have sown at least five acres to grain corn of a hybrid variety recommended by the Quebec Plant Products Board and their entry applications must reach agronomists' offices before the first of August.

\$1,577,585 farm consolidation aid last year

Mr Clément Vincent, minister of Agriculture and Colonization, has revealed that financial aid totalling \$1,577,585 for consolidating Quebec farms was paid during the year ending March 31st. Of this sum, \$497,578 was spent on land, \$546,600 on buildings, and \$533,406 on stock.

During the same fiscal year, a further \$1,531,014 was pledged for farm consolidation: \$472,885 for land, \$538,698 for buildings, and \$519,429 for stock.

Mr Vincent pointed out that, during the past three years, \$3,223,720 has been paid out and \$3,789,860 has been pledged under this agricultural assistance policy.

Grants for farm consolidation are made under the federal-provincial ARDA agreements with equal contributions by the two governments. The aim of the grants is to help farmers having less than 120 acres of arable land (before enlargement) to hasten the conversion of their farms into economically sounder enterprises through the purchase of additional land.

new regionalization powers for minister of agriculture

Quebec's Agriculture and Colonization Department Act has recently been amended so that "when the state of agriculture in any region requires the putting into operation of general measures to ensure the recovery or development thereof, the Minister may prepare plans, programs and projects with a view to better use of the agricultural resources of any zone which he designates in such a region, and may also carry out inquiries, studies and research for such purpose".

"With the approval of the Lieutenant-Governor in Council, the Minister may assume the direction and ensure the carrying out of such plans, programs and projects" and may acquire, lease or alienate any movable or immovable property, make grants, loans or advances, pay premiums, allowances or indemnities and carry out or cause to be carried out works" for agricultural improvements, development, or equipment.

For the carrying out of such programs, the minister may also "make agreements with any government or body and with any person, association, partnership or corporation".

Mr. Clément Vincent, minister of Agriculture and Colonization, said that the amendments have two main aims: a) regionalization or zoning of agricultural policies and programs, and b) flexibility of procedures and increased powers and operating methods in implementing regional agricultural plans and programs. He added that the amendments replace the act's division IX, which concerned the ARDA agreements, and that they were necessary because the ARDA act will henceforth be the responsibility of the Quebec Planning and Development Bureau.

Mr. Vincent pointed out that it is logical that the ARDA act should not be the sole responsibility of the agricultural ministry, because rural development is inseparable from urban development and the recovery of rural regions cannot be achieved at the agricultural level alone; all other primary sectors of the economy — forests, mines, etc. — are also involved.



Ewes and lambs on the farm of Andre Cotnoir at St-Bruno.

effect of weaning date on growth of lambs

Following feeding trials with young lambs weaned at different times, professors G. J. Brisson and J. P. Lemay of the Faculty of Agriculture at Laval University have concluded that it is better to wean lambs early than to wait till they are 15 days old, even though rate of growth — as judged by weight at eight weeks — was the same for both groups.

Lambs weaned at 3 to 5 days adapted to a new diet quickly (up to 12

days sooner) than those weaned at 15 days. It is also easier to dry a ewe off at the close of her colostrum production than when she is giving her maximum milk yield.

Growth rates of lambs were not significantly different with two different substitutes for ewe's milk composed of skim-milk powder, brewer's yeast, fats, and a mineral and vitamin supplement, and containing equal amounts of protein but differing in energy content (fat and sugar). However, the lambs which were fed the higher energy diet yielded the higher-grading carcasses.

The research was carried out with the help of a grant from the Quebec Agricultural Research Council.

the farm of lloyd e. brownlee & sons at clarendon in pontiac county

In 1934, Mr. Brownlee settled on a small farm of 60 acres while continuing to work at his trade of carpentry. In 1961, he went in for

raising purebred Jersey cattle and bought a second farm close to the first, which increased his arable land to a total of 160 acres. Today, he values his property, including livestock and machinery, at \$100,000.

In all, there are 120 acres of clay soil and the rest of the land is loam. In 1964, eight thousand feet of tile were laid to drain sixty acres of land.

Twenty-five acres of pasture are used for the young cattle and dry cows. The milking cows have a five-acre paddock where their feed is

brought to them. The remainder of the land is used for growing corn and hay. There are about 50 acres of corn. A more uniform stand of this crop would be desirable. The alfalfa is vigorous on the higher land and where the soil has been drained but is not thriving on the low-lying parts.

The Jersey herd consists of 75 cows, two bulls, and 55 young stock. Eight of the cows and one of the bulls, "Bazil Jester Royal", are classified as Excellent. The herd has an average type classification rating of 84.5 per cent — which gives an idea of the splendid conformation of these cattle. The average yield of 54 cows for the last year of testing was 6,750 pounds. The milk is shipped to an Ottawa dairy.

The buildings, both as regards construction and maintenance, are a tribute to Mr. Brownlee's skill as a carpenter. The recently built barn, measuring 160 feet by 34, is light and kept in admirable condition. It is completely painted with aluminum inside. There is a very large milkhouse equipped with a 4,400 pound cooling tank. On each of the farms there is an excellent 16 x 45 foot, concrete stave silo.

The farmhouse and its surroundings are very pleasant. The kitchen garden, bordered by an attractive hedge of Chinese elm, is well-stocked with vegetables and flowering plants.

Mr. and Mrs. Brownlee have six children. Their three daughters are married. The boys are still at home; Denzil, who is 25, works with his father; Elwyn is 20 years old and Elson 17.

It was a great pleasure for those judging the contest to meet people like these whose way of living and receiving visitors shows so much refinement.

(From the report of the 1968 Agricultural Merit Contest)

Women's Institutes

the matchbox theatre presents plays for hemmingford w.i.

The Hemmingford Branch of the Women's Institute whose interest in dramatics has been aroused through the Drama Project of the Provincial W.I., sponsored a Drama Night on April 26th. Three plays were presented by an amateur drama group from Montreal, The Matchbox Theatre Players.

The first play, entitled "The Rats" was a mystery story which kept the audience in suspense throughout. A comedy western, "The Great Western Melodrama", followed, providing absurd situations and characters, which the audience found most amusing: The third play, "Impromptu" was a modern play, using the lines to convey a sincere theme.

Members of the Matchbox Theatre are all amateurs, interested in dramatics, and working hard in this special field. They present plays to interested groups, without charge. They build their own scenery, make their own costumes, do their own makeup. The group came to Hemmingford a week before the local production, bringing all their own props, and taking time for special rehearsals. W.I. members, who sponsor a "Forgotten Patient" and give some assistance to the Douglas Hospital; were most interested to learn that the Matchbox Players often rehearse at the Douglas, and present plays there.

In the intermissions, the newly organized Brownie Pack, served coffee and doughnuts, and sold candy, to raise funds for their activities.

Mrs. Robert Curry, for Hemmingford Women's Institute, welcomed the audience. At the close of the productions, and the many curtain calls, Mrs. J. L'Esperance introduced Mr. Don Macquarrie, president of the Theatre group, and other members of their executive and the cast. She thanked them most sincerely for a fine evening's entertainment. The cast were entertained with light refreshments before their return to Montreal, by the W.I. It is hoped that the players will consider a return visit to Hemmingford, when this special type of entertainment can again be enjoyed.

"as a snow-ball rolls."

In 1956 Rawdon Branch, Montcalm County having from the time of their forming taken a very active part in Health-Welfare, formed a Dental Clinic for English speaking children (Catholic and Protestants) whose parents were not in a financial position to take care of their children's teeth. As a local boy who had taken up Dentistry as a profession had just opened an office in Rawdon, arrangements were made whereby the Q.W.I. Rawdon Branch would pay for dental work on a number of children, one visit per year and the parents would take care of the second visit. In some cases it was necessary for the W.I. to pay for both visits. Since 1956 approximately \$2,000.00 has been paid on for Dental care. Some families had four and five children, and some children were taken care of during their entire school years. One young chap who had one of his front teeth knocked out had two partial plates made, having lost the first one. At times it has been difficult to raise these funds as we are only a small branch. We have generally held a drawing during the summer months when summer residents and guests helped this needy cause. However, this year it was voted to hold a Card Party instead which was held recently and due to the generous efforts of all members, also a number of local merchants a very successful evening was enjoyed by over a hundred people with a profusion of nice prizes. So the ball has rolled and gathered sufficient to carry on for the next year.

f.w.i.c. on adult education on t.v.

The Federated Women's Institutes of Canada have forwarded a statement to the Standing Committee on Broad-

casting, Films and Assistance to the Arts, in which they refer to Bill C-194, an act to create a new National Educational Broadcasting Authority. This organization stresses that it should be clearly defined that any legislation to set up an ETV system in Canada should include adult education.

"As an organization of rural women", the statement goes on to say, "we would further like to emphasize the importance of such adult education programs being made available to communities whose television reception is limited to one channel. Some of these areas are remote and isolated but are desirous of this service, and their need is as great, if not greater than those living in metropolitan or more populated centres".

The statement points out that the Federation has, since its inception, had as its chief concern the development of a program of adult education in all the provinces, and more recently, in the Northwest Territories and the Yukon.

This position was emphasized in a resolution on ETV passed by members of FWIC at the last National Convention in 1967.

the australian territories to study canada. a.c.w.w.

"I have had a request from a branch of the Australian Country Women's Association, in the Northern Territory, in a remote area, an Aboriginal Reserve area where there is also a large mining development" reads a letter received at the office of the Federated Women's Institutes of Canada, from Mrs. A. R. Menzies, wife of the Canadian High Commissioner in Australia. This group, she explains, has chosen Canada as their country of special study for the year and would like the addresses of some Women's Institutes in Canada, preferably in some of our own northern area, with whom they might correspond and exchange information.

Relevant material and addresses were forwarded to the CWA International Officer, Mrs. Marree Sinclair,

as directed by Mrs. Menzies. Acknowledging receipt of the parcel, Mrs. Sinclair says in part: "The contents of your parcel were most interesting to us. Our Branch of the CWA here in the North has been established less than two years so this is our first experience with this type of thing. Learning what has been done and achieved by your members will be quite an inspiration to us".

Mrs. Sinclair comments on the contrast between the Territories, primarily water, and also doubts if any of their members have ever seen snow, but it is the hope of the CWA and FWIC that this exchange may be of value to the women in these areas where problems would be quite similar in spite of the disparity in climate. Both organizations are Constituent Societies of the Associated Country Women of the World.

the W.I. the month with

ARGENTEUIL: Arundel members brought in and filled ditty bags. **Brownsburg** had a question and answer period about Bell Telephone Services with Mr. B. Parent, Regional Director of Bell Telephone as guest speaker. **Dalesville-Louisa** presented brooches to the Director, Make-Up Lady and members of the cast of the successful play, "Ladies of the Mop". **Frontier** heard the school nurse speak on her duties at the school. **Jerusalem-Bethany** heard the nurse from the Health Clinic speak about her work. **Lachute** heard a report and discussion on the progress of the work on "The Residence of Lachute". **Pioneer** heard a paper on Citizenship.

BONAVENTURE: Cascapedia members paid a cent an inch of their waist measurement as their Roll Call. They sent out Sympathy and Get-Well Cards. **Matapedia** made plans to entertain the County Convention. The Mystery Package donated by Miss M. Babcock won by Mrs. Fitzgerald. **New Richmond West** members exchanged plant slips as their Roll Call. They planned a social evening, heard papers on: Citizenship — "A Life

You Lived Today"; Education — "Higher Education for Nurses"; Home Economics — "Recipe for a Fish Batter"; Welfare & Health — "Retardation"; and the Publicity Convenor read a poem "Two Bits goes to Church". **Port Daniel** made plans for attending the Annual Convention and answered the Roll Call by naming a Canadian tree and its uses.

BROME: Abercorn held an auction, netting them \$6.90. Seeds were distributed for the School Fair. They made repairs to the W.I. Hall and were happy that one of the members won first prize in the County Competition (Costs) for her quilt. **Austin:** W.I. Bursaries were awarded to Laura Dowbiggan and Vivian Robitaille, Grade VII and to Frederick Hopps, Grade X. Ten Ditty Bags were filled and shipped. They are busy preparing for their big Annual Garden Party. Won second in Quilt and second in Cushion in the Coats Contest. **Knowlton's Landing** members made five Ditty Bags. Held a plant sale and records that they won 1st prize on the Cushion in the Coats Contest. **South Bolton** filled and shipped Ditty Bags. Planned a Food Sale and Card Party and won first prize in the Coats Contest for the Cloth and Apron Set. **Sutton** reports two new members and made 15 Ditty Bags. The members also served tea and coffee, donuts and cookies at the Blood Donor Clinic. They are planning a picnic and a visit to the Museum.

CHATEAUGUAY - HUNTINGDON: Aubrey-Riverfield heard an encouraging report of the Public Speaking Contest held in Howick Elementary School. A \$10 donation was given towards the prizes. A donation of \$10 was given to the Retarded Children's Fund and \$5 was given to the Chateauguay Valley Music Festival. A quiz of agriculture and an informal talk on flowers was given. A member was given a Life Membership and a Sunshine Basket sent to a member just out of hospital. Each member donated \$1.00 towards filling the Ditty Bags and a carton of clothing and jewelry was sent to the Douglas Hospital. This branch petitioned the Village Council re Garbage Collection. They realized \$20 from a White Elephant sale and the sale of plants. **Dewittville:** The Education Convenor presented prizes on behalf of her Branch to the pupils of Huntingdon

Academy for Public Speaking. A demonstration was given by Mrs. Hovarka on the preparation of fancy foods for a Buffet Supper. **Dundee:** A member attended Open House sponsored by the Chateaugay Valley Association for the Mentally Retarded and gave an excellent report of her visit. A donation was made to this Association. Mrs. Stowell displayed hand-made cushion tops in feather stitch and two quilt tops. **Franklin Centre** members sported Fancy Bonnets and told how they had been made. Their membership at one meeting ranged from 1 month to forty years. The members catered to a Pancake and Sausage Supper and were also the hostesses at the County Public Speaking Contest when donuts and coffee were served. Hemmingford saw slides of Western Canada, Holland and Expo 67. Mr. Pierre Phillon, Agronome, spoke on "Agriculture - a Profession and a Good Way of Life". Ayers Pharmaceutical Laboratory at Rouses Point, N.Y. was visited. A sale of seeds, bulbs and plants was held and a display of National Costumes was held. This branch sponsored Drama Night and was also hostess branch for the County Convention. They also drew up the programme for the School Fair and also toured Fortin's Bakery. **Howick:** The making of all kinds of Fancy Rolls was demonstrated by Mrs. J. D. Lang, assisted by Mrs. M. Jones, while Mrs. H. Greig demonstrated the making of Swedish Tea Ring and an Apricot Daisy Twist. \$10 was donated to the prize winning pupils from Howick at the Music Festival. A talk was given by Mr. Raymond Smith of the Green Giant Cannery at St. Remi. A demonstration was also given on the making and frosting of a Festive Cake. **Huntingdon** had as their Roll Call "An old fashioned weather forecast". This branch decided to buy a copy of Canadian Heritage for the use of the members. They had a sale of plants and home baking. Several members attended Open House at Gay Valley School for Retarded Children.

COMPTON: Brookbury have held three very successful card parties to raise funds. They heard an excellent report of the County Meeting. **Bury:** A member told about her recent trip to Germany. The members made and filled twenty ditty bags. A sale of plants and slips was held and one

plant was drawn for. A donation was given to Pope Memorial School for prizes in Public Speaking. The members also held a "Make Believe Tea". **East Angus** members answered the Roll Call by naming a Province and its Floral Emblem. They heard papers on "Duke describes himself as DUM" and one about Michael Colas, a Sherbrooke artist, an item urging Quebec women to push passage of Property Law, also a report on "the W.I. wins Safety Awards". **East Clifton** held a Pot Luck Supper and cleaned the Community Hall.

MEGANTIC: Inverness members toured the Paul Maurice Dry Cleaning building in Plessisville where they were later entertained to lunch at the Hotel Manoir Plessis. Each member was given a beautiful rose. Twelve Ditty Bags were filled and shipped and entries made in the Coats Contest. **Kinnear's Mills** filled ten Ditty Bags and gave a donation to the Sherbrooke Hospital. Plans were made to join with Inverness in attending East Angus Branch meeting as invited guests.

MISSISQUOI: Cowansville exchanged plants and slips and heartily welcomed a new member. A protest was voiced against the present Post Office service. A description was given of the attractions of a local museum. An article was read on the bread and butter consumption in Canada. A letter was read from our "Link Institute" in England. **Dunham** held a plant and slip sale. An article was read on Bad News for Smokers, another on Macdonald College Expansion, and one from an old Cook Book on Things Well to Know and Do. A member described an old book written by a former rector of Dunham on Rev. John Godden's Trip to England in 1858. **Fordyce** reported work done on their W.I. Picnic Site; the building repaired, Canadian and Quebec flags erected, and pine trees set out. A contest was held on Jumbled Names of Canadian Cities. **Stanbridge East:** For the Roll Call, each member brought a school picture of herself, which caused much guessing and amusement. The Education Convenor conducted a contest on Names of Cars, past and present. The bilingual version of O Canada was accepted to be sung at meetings. A new Salute to the Flag was adopted until an official one is decided upon.

MONTCALM: Rawdon: Appreciation of Mrs. Ossington's visit was evidenced by a record turnout of members and two guests, and her interesting talk fully justified this. A get-well card was sent to a life member, Mrs. Vail, who has been greatly missed since she has been ill and unable to attend meetings for several months. Through the courtesy of the Board of the Anglican Church, a Military Whist in aid of the Dental Clinic was held in their hall, netting a sum of \$150.00. Refreshments and a number of prizes were provided by members. Local merchants and businessmen generously gave door prizes. Mrs. Copping gave a brief explanation of our Dental Clinic project.

RICHMOND: Cleveland held a contest by Citizenship Convenor — Identify prominent people in the news. Winners were Mrs. A. T. Smith and Mrs. Gladys Perkins. Prizes were awarded to seven members who had perfect attendance during the past year. **Richmond Hill:** Eight Ditty Bags are to be made and filled. Held a contest on cookies. Mrs. Frank Wallace received the prize. **Richmond Young Women:** Mrs. C. Mastine, Education Convenor read an article on the Home for Senior Citizens soon to be built in Richmond. Mrs. W. Crack, Agriculture Convenor, gave a reading on "which comes first, the pill or the egg?". A poultry scientist has been experimenting by giving birth control pills to hens so that they will hatch bigger and better eggs. Held a contest on squares, won by Mrs. N. Jameson. A quiz on Food and Drugs was won by Mrs. J. Perkins. Four members were awarded prizes for perfect attendance. A donation was made to Save The Children Fund. **Spooner Pond:** Roll Call — "Bring an article in a Blown Up Paper Bag." These were sold by Chinese Auction. Each member bought a Tuberous Begonia Bulb to be grown for competition. Donation was given to the Cancer Society. Sunshine Box was sent to a member's husband who has been hospitalized. Fifteen Ditty Bags which were made by Mrs. Blanchard are to be filled. Two members are entering the J. P. Coats Competition.

SHEFFORD: Granby Hill: The roll call was answered by bringing an antique and giving it's history. Many interesting articles were displayed. This branch filled and shipped twenty-

four Ditty Bags and gave a shower for a June Bride-to-be. They also successfully competed in the Coats Contest. **Waterloo-Warden** members answered the Roll Call by naming their Favourite Hobby. Heard articles on Indoor and Outdoor Carpeting, Education in Nigeria and a poem "Young at Heart". Gave a donation to help cover expense of bus transportation for Retarded Children to visit Shriner's Circus. Made and shipped 14 Ditty Bags. Sale of home-made articles netted \$11.35.

SHERBROOKE: Ascot: Roll Call, "Green Thumbs or Greenhorns" brought many good suggestions on garden care. A sale of house and garden plants proved very satisfactory. A beautiful quilt was on display. The History of Ascot is to be brought up to date and members are working on it. **Belvidere** members are filling Ditty Bags and work at the Cancer Station. This branch is hard at work on a skit for the Drama Contest. The contest at their meeting proved amusing — Draw A Farm Animal. They also

entertained the Canterbury branch. **Brompton Road** members guessed the number of peas in a jar and had a prize for the oldest and youngest mother at the meeting. This branch purchased sufficient land adjoining the Community Hall to provide ample parking space. Twelve Ditty Bags were handed in. **Lennoxville:** Mrs. Arthur Lovelace showed slides of her visit to Germany, France, Switzerland and Austria. They answered the roll call by naming an outstanding improvement in Lennoxville in the past ten years. Ayer's Cliff and East Angus branches were guests at this meeting. **Milby** held a Vegetable & Flower Contest and a slip and bulb sale. They filled 12 Ditty Bags and sent baskets of three sick and shut-ins.

STANSTEAD: Ayer's Cliff heard a review of The Owl Pen, by Kenneth Stevens. Instead of making and filling Ditty Bags for Save The Children, members gave \$2.00 each to be used to send a needy child to summer camp for two weeks and to buy extra camp clothing and equipment for the child.

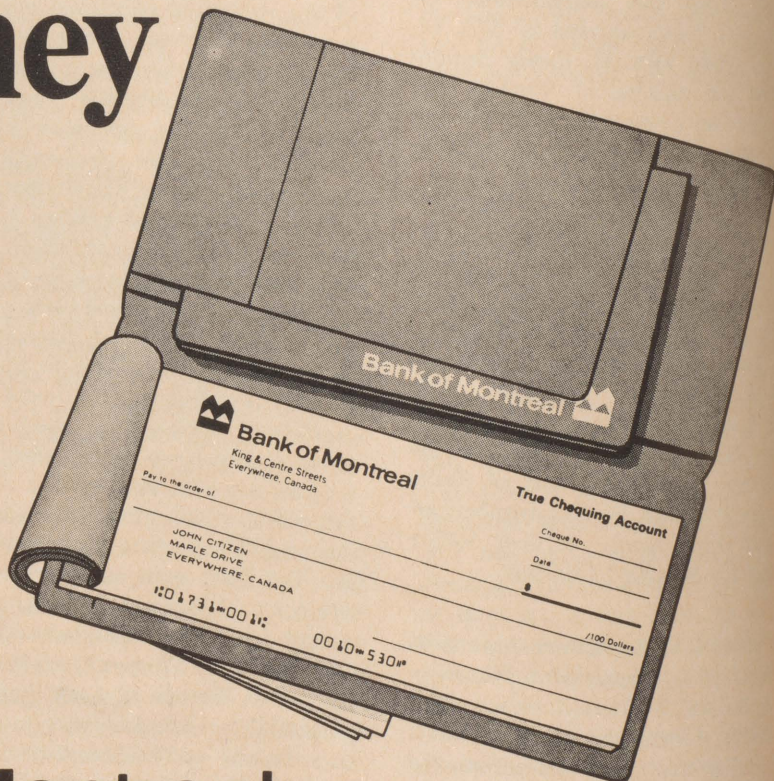
Beebe donated to the Cafeteria in Beebe Elementary School. Made, filled and mailed 14 Ditty Bags; entertained the Stanstead North W.I. at a social evening; made and donated curtains for Beebe Council Room. A member had given three radio broadcasts over WIKE Newport, Vt. The delegate gave an excellent report of County Meeting. **Hatley** entertained members of other branches with a travelogue given by Captain and Mrs. Brown, who showed slides taken during their travels in Mexico, India and Ceylon. Held an apron Contest, aprons entered being given for the W.I. Sales Table at the County Fair. Turned in eight filled Ditty Bags. They are sponsoring two girls at Camp Livingstone this summer. **Hatley Centre** enjoyed a jumbled flower contest prepared by the Convenor of Agriculture. Voted to subscribe to the Federated News for each member. Turned in twelve filled Ditty Bags. **Stanstead North** entertained guests with a demonstration of ceramics by two local hobbyists. Turned in Ditty Bags.

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changes in farm credit legislation

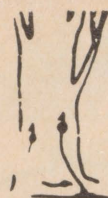
Following the passing of four bills concerning farm credit Mr. Clément Vincent, minister of Agriculture and Colonization, said that farm credit reform is now well launched.

Two of the bills — number 32 entitled "An Act to again amend the Civil Code" and number 35, "An Act to authorize additional credits for farm loan purposes" — were adopted at the third reading, on June 10th. The other two — number 31, "An Act to amend the Farm Credit Act," and number 33 "An Act to amend the Farm Improvement Act" — were adopted on June 11th. A fifth bill, also presented by the minister, entitled "An Act to promote the development of agricultural exploitations", has been referred to the national Assembly's agricultural committee for study.

Mr. Vincent said that the four bills make many changes in Quebec's farm credit programme. The main changes are: an increase in the maximum amount of loans granted under the Farm Credit Act from \$15,000 to \$25,000; provision for loans up to 90% of the mortgageable value of an economic farm (not necessarily a newly established farming enterprise) operated by a farmer between 21 and 40 years or by joint borrowers, one of whom is in that age group, and similar loans to farmers acquiring extra land to enlarge their farms or carrying out an improvement programme in conformity with regulations; and an increase, from \$7,000 to \$10,000, in medium-term loans eligible for the government's guarantee and 3% interest rebate under the Farm Improvement Act.

The new acts also allow partnerships and corporations of farmers whose principal purpose is the operation of a farm to obtain long or medium term loans on the same grounds as an individual farmer.

One bill calls for an additional sum of \$30 million to be made available to the Quebec Farm Bureau for long-term loans to farmers.



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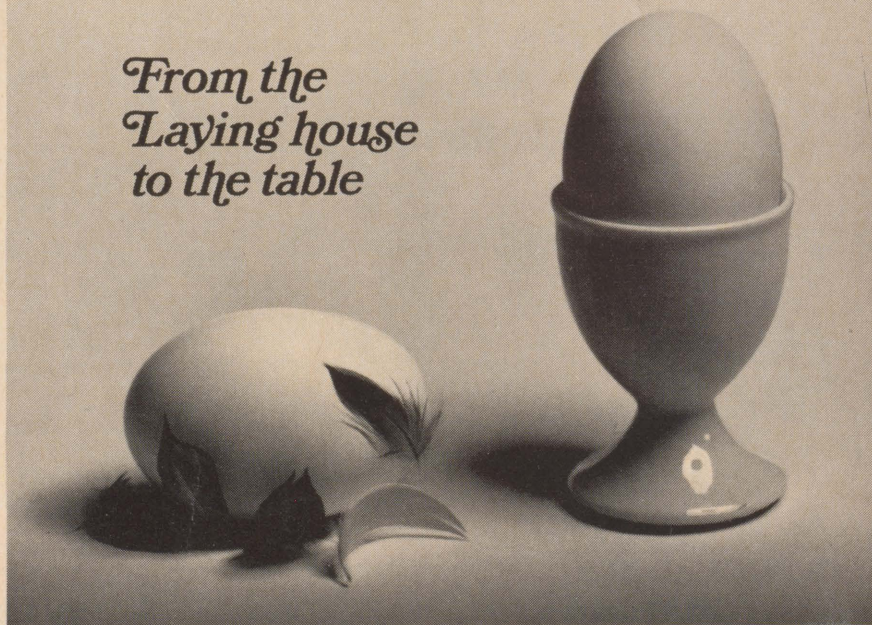
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